Abstract

The accelerated growth rate of the human intellectuality of any country warrants a rapid development of information infrastructural facility protecting their intellectual property. Basically determination of potential Geographical Indication (GI) is a necessity for timely protection of intellectual property of geographical characteristics. The process of determination and its
subsequent filing for registration of GI remains manual in most of the developing and least developed nations. Apart from determination of potential candidature of GI and registration of GI, various types of analysis of existing GIs is one of the key issues to be tackled also for timely protection of GI. The present work reports the development of an efficient interoperable Service Oriented Architecture (SOA) based GI SDI Model (Acronym: GI3 (Geographical Indication Information Infrastructure)) to provide better geospatial web services for different applications in terms of their functionality, ease of operation and performance as applied in various GI operation. The GI3 is modular and allows the publishing of web service descriptions as well as to submit requests to discover the web services of user’s interests. The model supports integration of applications and uses thin-client architecture. Web Map Service (WMS), Web Features Service (WFS) and Web Catalogue Service (CS-W) of Open Geospatial Consortium (OGC) standards have been used for sharing and exchange of geospatial data pertaining to GI3. The open source GIS software, used for development of GI3, include Quantum GIS for creation of GI geospatial database, PostGIS for storing of spatial database, MYSQL for storing of security aspects of spatial and non-spatial data; ALOV, GeoServer, GeoNetwork, GeoWebCache and Apache Tomcat for imparting geospatial web capabilities and PHP (Hypertext Preprocessor), JSP (Java Server Pages) and GeoExt (Geo Extension) for dynamic server side scripting. The developed GI3 presently provides detailed information about all the existing GIs and proposed GIs of India as a test case and aims to deliver spatial information related to GI at affordable cost and is expected to be beneficial to the general and power users. The same may be used in future for other countries on expanding the volume of spatial data to include the Globe.

Reference

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**Index Terms**

Computer Science
Information Technology

**Key words**

Geographical Indication
Intellectual Property Rights
SDI
Open Source GIS
SOA
GI3